

Attorney's Docket No. 030673-134Application No. 10/076,342

Page 6

REMARKS

The Examiner is thanked for the careful examination of the application, and for the suggestions for amending the application. In view of the foregoing amendments and the remarks that follow, the Examiner is respectfully urged to reconsider and withdraw the outstanding rejections.

By the foregoing amendments, claim 1 has been amended and new claims 8-11 have been added. Claim 6 has been canceled previously

Claim Objections:

In view of the objection to claim 1, claim 1 has been amended to overcome the issue raised by the Examiner. Withdrawal of the objection is respectfully requested.

Art Rejections:

Claims 1-5 and 7 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 11-014656, hereinafter Horiuchi, in view of U.S. Patent No. 6,258,007, hereinafter Kristjansson. It appears that the Examiner alleges that most of the elements of claim 1 are taught or suggested by Horiuchi. However, the Examiner appears to rely on Kristjansson for an alleged teaching that it would be obvious at the time of the invention to make the output shaft 22 of Horiuchi extend through the hollow shaft 7 in order to permit control of parameters of input and output of the harmonic drive assembly at a convenient common end of the harmonic drive assembly. To expedite prosecution of the

Attorney's Docket No. 030673-134Application No. 10/076,342

Page 7

application, claim 1 has been amended to more clearly distinguish over the prior art. However, Applicants reserve the right to challenge the Examiner's interpretation of Horiuchi and/or Kristjansson at a later time if necessary and appropriate. In addition, Applicants also reserve the right to challenge the Examiner's alleged motivation to combine Horiuchi and Kristjansson as set forth in the Official Action.

Claim 1, the only independent claim in the application, has been amended to clarify the arrangement of the bearings within the actuator. Specifically, claim 1 now defines four bearings. For the convenience of the Examiner, the bearings of claim 1 will be compared to the preferred disclosed embodiment. However, the present invention is not limited to the preferred disclosed embodiment. Specifically, the cross roller bearing is illustrated by bearing 15, the second bearing is illustrated by bearing 55, the wave bearing is illustrated by bearing 32, and the first bearing is illustrated by bearing 54. Claim 1 now defines that the output shaft is mounted to the flexible external gear boss and is rotatably located inside the hollow rotational shaft of the motor, and is rotatably supported in the housing via the cross roller bearing. Claim 1 has been further amended to indicate that the cross roller bearing, the second bearing, the wave bearing, and the first bearing are located in this order from a side of the wave gear reduction drive along the center axis of the housing. The claimed bearing arrangement is advantageous when it is intended to manufacture a flat actuator. Specifically, the arrangement enables a more compact design. In contrast, in Horiuchi, the bearing 23 is located at the outer side of the cross roller bearing 19.

Attorney's Docket No. 030673-134Application No. 10/076,342

Page 8

Furthermore, Kristjansson does not overcome the deficiency of Horiuchi, with respect to the rejection of claim 1.

Accordingly, claim 1, as now amended, is clearly patentable over the applied prior art.

To further define the protection to which the Applicants are entitled, new claims 8-11 are submitted herewith. New claims 8-11 depend either directly or indirectly from amended claim 1, and are thus patentable over the applied prior art at least for the reasons set forth above with respect to claim 1.

In addition, claim 8 indicates that the actuator further includes a stator, and that the rigid internal gear and the stator are fixed to the housing. Claim 9 depends from claim 8, and further indicates that the rigid internal gear and the stator are fixed to a common portion of the housing.

In contrast to claims 8 and 9, in Horiuchi, the rigid internal gear is fixed on the housing 16, and the stator is fixed on a structure 6.

With regard to claim 10, the cross roller bearing is defined as being arranged axially external of the second bearing. And, in claim 11, the cross roller bearing is defined as not being in radial alignment with the second bearing. Such features are also not taught or suggested by the cited prior art.

Accordingly, in view of the foregoing amendments and remarks, claims 1-5 and 7-11 are now patentable.

Attorney's Docket No. 030673-134Application No. 10/076,342

Page 9

The Examiner is respectfully requested to list U.S. Patent No. 6,258,007 on a form PTO-892 so that it will be formally made of record in this application.

In the event that there are any questions concerning this response, or the application in general, the Examiner is respectfully urged to telephone the undersigned attorney so that prosecution of the application may be expedited.

Respectfully submitted,

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CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office Fax. No. (703) 872-9327 on January 5, 2004.

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